Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1, 4, 7-10, 12-16, 18, and 20-23 are pending in the application, with claims 1, 7, 12, and 16 being the independent claims. Claims 2, 3, 5, 6, 11, 17, and 19 were previously cancelled without prejudice to or disclaimer of the subject matter therein. Claims 1, 7, 12, 16, and 20-23 are sought to be amended for clarity. Applicants reserve the right to prosecute similar or broader claims, with respect to the cancelled and amended claims, in the future. Support for the amendments is found in the instant specification at least at, for example, paragraphs [0018], [0019], [0022], [0026] - [0029]. [0032], and [0034] and FIGs. 1-3 of U.S. Publication No. 2002/0077981 to Takatori *et al.* These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Statement of Substance of Examiner Interview

Further to the Interview Summary mailed July 28, 2010, Applicants submit the following Statement of Substance of Interviews conducted between the Examiner and Applicants' representative, Randall K. Baldwin, on July 23, 2010. Applicants' representative gratefully acknowledges the courtesies extended by the Examiner in granting a telephone interview on July 23, 2010. In the interview, the Examiner clarified the rejections of claims 12 and 20-23 under 35 U.S.C. §§ 101 and 112, second paragraph.

During the interview, the Examiner proposed claim amendments to overcome the rejections under 35 U.S.C. §§ 101 and 112 of claims 12 and 20-23. The Examiner also clarified comments regarding his interpretation of the teachings of the applied referenees. In particular, the Examiner clarified his comments regarding independent claims 1, 7, 12, and 16 and the teachings of Alfano, Golestani, and Seddigh. Applicants' representative discussed distinctions between claims 1, 7, 12, and 16 and the applied references. No specific agreement was reached.

The substance of the discussion and arguments in the telephone interview is included in the present remarks.

Rejection under 35 U.S.C. § 101

At page 2 of the Office Action the Examiner rejected claims 12 and 20-23 under 35 U.S.C. § 101 as allegedly not falling within one of the four statutory categories of invention. Applicants respectfully traverse this rejection.

Without acquiescing to the propriety of the rejection, and as discussed during the aforementioned interview, Applicants have amended claims 12 and 20-23 to expedite prosecution. Amended claim 12 recites, *inter alia*, "[a]n article of manufacture including a non-transitory computer-readable medium encoded with instructions, execution of whieh by a computing device cause the computing device to perform operations . . . ."

Applicants note that "a non-transitory computer-readable storage medium," as recited by claim 12, comprises all computer-readable media, with the sole exception being a transitory, propagating signal. By way of example and not limitation, the specification describes exemplary embodiments wherein "communication terminal

Atty. Dkt. No. 2222.6080000

device 1 has a central processing unit (CPU) 11 for controlling overall operation of the communication terminal device 1, a memory 12 for storing a control program and various data, the memory 12 being also used as a working area" and "the CPU 11 determines whether information relative to packet units that can be recognized by the destination communication device is stored in the memory 12" (Applicants' specification, paragraphs [0022] and [0026]).

Claims 20-23 as amended herein recite, using respective similar language, a status of transmission data received by the wireless communications device or current traffic congestion of a communication link that the transmission data is to be transmitted over.

Support for these amendments is found in the specification, at least at, for example, paragraphs [0022] and [0026] - [0029] and FIGs. 1-3. Therefore, claims 12 and 20-23 are tied to statutory classes.

Accordingly, at least based on the amendments above, Applicants respectfully request that the rejection of claims 12 and 20-23 under 35 U.S.C. § 101 be reconsidered and withdrawn.

Rejection under 35 U.S.C. § 112

Claims 20-23 were rejected under 35 U.S.C. § 112, second paragraph as being allegedly indefinite for failing to point out and distinctly claim subject matter which applicants regard as the invention. Applicants respectfully traverse this rejection.

As discussed during the aforementioned telephonic interview, without acquiescing to the propriety of the rejection and merely in order to expedite prosecution,

- 14 -   TAKATORI *et al.*

Reply to Office Action of July 2, 2010   Appl. No. 10/054,038

Applicants have amended claims 20-23 to accommodate the rejection of the Examiner.

Based on the above remarks and in view of the present amendments to claims 20-23,

Applicants submit that claims 20-23 are now in compliance with 35 U.S.C. § 112.

Accordingly, Applicants respectfully request that the rejection of claims 20-23

under 35 U.S.C. § 112 be removed.

Rejections under 35 U.S.C. § 103

Claims 1, 4, 7-9, 12, 13, 15, 16, 18, and 20-23 were rejected under 35 U.S.C. §

103(a) as being allegedly unpatentable over U.S. Pat. No. 6,094,423 to Alfano *et al.*

("Alfano") and U.S. Pat. No. 6,965,943 to Golestani ("Golestani") in view of U.S. Pat.

No. 7,035,214 to Seddigh *et al.* ("Seddigh").

Claims 10 and 14 were rejected under 35 U.S.C. § 103(a) as allegedly being

unpatentable over Alfano in view of Golestani and Seddigh and further in view of U.S.

Pat. No. 6,307,867 to Roobal *et al.* ("Roobal").

Applicants respectfully traverse these rejections for the reasons stated below.

As discussed during the aforementioned interview, without acquiescing to the

propriety of the rejections, and merely to expedite prosecution, Applicants have amended

claims 1, 7, 12, 16, and 20-23.

Claims 1, 7, 12, and 16

Independent claims 1, 7, 12, and 16 recite features that distinguish over the

applied references. For example, claim 1 as amended herein recites, among other

features:

> a determining device configured to select an appropriate packet size for
> transmission data to be packetized, ***the appropriate packet size being***

- 15 -   TAKATORI *et al.*

Reply to Office Action of July 2, 2010   Appl. No. 10/054,038

selected according to data communication rates for packets previously transmitted to the destination communication device; and:

the response indicating the packet sizes that are recognizable by the destination communication device; or

a retransmission request that occurs in response to detecting a communication error or *traffic congestion on a communication link established between the wireless communications device and the destination communication device,* the retransmission request occurring while packets are being transmitted, *wherein the appropriate packet size is smaller than the packet sizes that are recognizable by the destination communication device or sizes of the packets previously transmitted to the destination communication device*[.]

Further, for example, claims 7, 12, and 16 as amended herein recite, using respective language, *inter alia*:

selecting an appropriate packet size for transmission data to be packetized, *the appropriate packet size being selected according to data communication rates for packets previously transmitted to the destination communication device;* and:

the response corresponding to the packet sizes that are recognizable by the destination communication device; or

a retransmission request that occurs in response to detecting a communication error or traffic congestion on a communication link established between the . . . device and the destination communication device occurring while packets are being transmitted, *wherein the appropriate packet size is smaller than the packet sizes that are recognizable by the destination communication device or sizes of the packets previously transmitted to the destination communication device.*

With reference to claim 1, the Examiner acknowledges that Alfano "fails to disclose a method wherein a received configured to receive a response to the query from the destination communication device, the response indicating the packet sizes that are recognizable by the destination communication device." (Office Action, page 6). Alfano teaches that a transaction protocol, in comparison to a connection-oriented protocol, "has

a low implementation and operating cost." (Alfano, col. 2, lines 34-36.) However, Alfano notes the use of a transaction protocol is not always possible since transaction protocols are "designed around a maximum amount of data being allowed to be transmitted in each message exchange." (Alfano, col. 2, lines 31-34.). As such, Alfano teaches the use of a connection-oriented protocol is required in instances where the maximum amount of data to be transmitted exceeds this limit of a transaction protocol, i.e., the maximum transfer unit (MTU) size. Alfano teaches "an ideal solution" is performed by using the transaction protocol in cases where the transaction protocol is sufficient to carry messages "and a connection-oriented protocol in all other cases." (Alfano, col. 2, lines 50-54). Applicants respectfully submit that Alfano's scheme for transitioning from a transaction protocol to a connection-oriented protocol does not teach or suggest the above-noted "selecting an appropriate packet size for transmission data to be packetized" recited in claims 1, 7, 12, and 16.

Alfano teaches that transaction protocols merely include "a short request for information by an initiator and a response to the request from the recipient." (Alfano, col. 2, lines 15-17.) In Alfano's system,

> [t]he processor is preferably programmed to *initiate a* wireless *request* to a server (or receive a wireless request from a server) *using a transaction protocol and* then to *continue communications using the transaction protocol if a response* from the server (or from the communication device 50) *is less than a maximum transfer unit size* and *else* subsequently *communicate using a connection oriented protocol upon determining* that *the response* from the server (or from the communication device 50) *is greater than the maximum transfer unit size* by detecting receipt of data packets of a segmented response from the server (or from the communication device 50).

(Alfano, col. 5, lines 53-60) (emphasis added).

Thus, in Alfano's system, only a *single message* is transmitted from both the initiator and the recipient in a *single transaction*. If the response to a request sent by an initiator is greater than a single maximum transmission unit (MTU), the responder (i.e., the recipient) will segment the message and eventually begin to execute a connection-oriented protocol.

In summary, Alfano transitions from a transaction protocol to a connection-oriented protocol when a message to be transmitted has a message length greater than a *single* MTU. As a result, the message is segmented into smaller message sizes and transmitted via a connection oriented protocol.

However, Alfano fails to teach or suggest that the message segments are selected according to *data communication rates for packets previously transmitted* to the destination communication device . . . *wherein the appropriate packet size is smaller than the packet sizes that are recognizable by the destination communication device or sizes of the packets previously transmitted to the destination communication device*, as respectively recited in claims 1, 7, 12, and 16. Instead message segments in Alfano's system are merely selected to be less than a single MTU. Applicants submit that the message segment selection discussed in Alfano also fails to teach or suggest *selecting* an appropriate *packet size according to . . . a retransmission request that occurs in response to detecting a communication error or traffic congestion on a communication link established between the . . . device and the destination communication device*, as recited, using respective similar language, in claims 1, 7, 12, and 16.

Golestani fails to eure the above-noted deficiencies of Alfano. Golestani is stated by the Examiner to teach "wherein a receiver configured to receive a response to the

query from the destination communication device, the response indicating the packet sizes that are recognizable by the destination communication device and wherein the appropriate packet size is smaller than he packet sizes that are recognizable by the destination communication device." (Office Action, page 6). Applicants disagree.

Golestani discloses that a "window scheme for end-to-end congestion control employs an arrangement whereby the amount of outstanding data for a given session is limited to *a maximum number of packets*" and "[t]his number is *referred to as the window size.*" (Golestani, col. 2, lines 30-33) (emphasis added). Golestani further discloses "[i]nformation about the recommended window size, or rate of transmission, is then communicated to the transmitting end apparatus of the session through a feedback path that is part of another session (from the receiving end apparatus serving as the transmitting end apparatus of this other session)" and "the receiving end develops a recommendation of the optimum window size or transmission rate and transmits that to the transmitting end." (Golestani, col. 3, lines 14-22). However, nowhere does Golestani teach or suggest "wherein the appropriate packet size is smaller than the packet sizes that are recognizable by the destination communication device or sizes of the packets previously transmitted to the destination communication device," as recited, using respective language, in claims 1, 7, 12, and 16.

The window size or rate of transmission discussed in Golestani refers to a maximum number of packets, not packet sizes. As discussed during the aforementioned Interview, Applicants respectfully submit that the transmission rate disclosed in Golestani does not teach or suggest selecting an appropriate packet size. However, even assuming *arguendo* that the Examiner's characterization of Golestani's window size or

transmission rate as being analogous to a packet size is correct, which Applicants do not concede, Golestani does not provide the missing teaching or suggestion of Alfano with respect to claims 1, 7, 12, and 16, as noted above.

Thus, neither Alfano nor Golestani, singly or in the allegedly obvious combination, teach or suggest "selecting an appropriate packet size according to . . . *data communication rates for packets previously transmitted to the destination communication device;* or a retransmission request that occurs in response to detecting a communication error or *traffic congestion on a communication link established between the . . . device and the destination communication device,* the retransmission request occurring while packets are being transmitted, *wherein the appropriate packet size is smaller than the packet sizes that are recognizable by the destination communication device or sizes of the packets previously transmitted to the destination communication device,*" as recited, using respective language, in claims 1, 7, 12, and 16. Therefore, the allegedly obvious combination of Alfano and Golestani cannot be used to establish a *prima facie* case of obviousness for claims 1, 7, 12, and 16.

With regards to previously pending claim 1, the Examiner acknowledges that "[b]oth Alfano and Golestani fail to disclose if a retransmission request that occurs in response to detecting a communication error or traffic congestion between the wireless communications device and the destination communications device, the retransmission request occurring while packets are being transmitted." (Office Action, page 7). Instead, the Examiner relies on Seddigh to cure the acknowledged deficiencies of Alfano and Golestani. However, even assuming *arguendo* that Alfano, Golestani, and Seddigh can be properly combined in the manner suggested by the Examiner, which Applicants do

- 20 -   TAKATORI *et al.*

Reply to Office Action of July 2, 2010   Appl. No. 10/054,038

not acquiesce to, the Examiner does not use Seddigh to cure, nor does Seddigh cure, the deficiencies of Alfano and Golestani noted above.

Seddigh is used on page 7 of the Office Action to teach "a method wherein a retransmission request that occurs in response to detecting a communication error or traffic congestion between the wireless communications device and the destination communication device, the retransmission request occurring while packets are being transmitted." Even assuming for the sake of argument that the Examiner's interpretation of Seddigh is correct, which Applicants do not concede, Seddigh does not provide the missing teaching or suggestion with respect to selecting an appropriate packet size according to . . . *data communication rates for packets previously transmitted to the destination communication device*; or a retransmission request that occurs in response to detecting a communication error or *traffic congestion on a communication link established between the . . . device and the destination communication device, . . . wherein the appropriate packet size is smaller than the packet sizes that are recognizable by the destination communication device or sizes of the packets previously transmitted to the destination communication device*, as recited, using respective language, in claims 1, 7, 12, and 16.

Rather, Seddigh discloses that "[i]f receiver 17 detects that a data packet is missing, a negative acknowledgment is sent back, or returned, to transmitter 15" and "the receipt of a negative acknowledgment signals to transmitter 15 that the packet may have been lost due to network congestion." (Seddigh, col. 6, lines 14-17 and 21-23). Seddigh further discloses that "[w]here no negative acknowledgments are received in a predetermined round-trip time, the *transmission rate is increased*" and "[i]f no negative

acknowledgments are received during the round-trip time, transmitter 15 assumes packet

transmission was successful and increases the congestion window." (Seddigh, col. 7,

lines 31-36).

While Seddigh may describe ***increasing a transmission rate*** or congestion

window in response to negative acknowledgments or the lack thereof, Seddigh is silent

regarding the capability of selecting an appropriate ***packet size*** . . . wherein the

appropriate packet size is smaller than the packet sizes that are recognizable by the

destination communication device or sizes of the packets previously transmitted to the

destination communication device, as recited, using respective language, in claims 1, 7,

12, and 16.

Accordingly, Applicants respectfully request that the Examiner reconsider and

withdraw the 35 U.S.C. § 103(a) rejection of claims 1, 7, 12, and 16 and pass these

claims to allowance. At least based on their respective dependencies to claims 1, 7, 12,

and 16, claims 4, 8-10, 13-15, 18, and 20-23 should be found allowable over the applied

references, as well as for their additional distinguishing features. See *In Re Fine*, 837

F.2d 1071 (Fed. Cir. 1988) and M.P.E.P. § 2143.03.

Claims 10 and 14

The Examiner rejected claims 10 and 14 under 35 U.S.C. § 103(a) as allegedly

being unpatentable over Alfano in view of Golestani and Seddigh, and further in view of

Roobal. (Office Action, page 17). Applicants respectfully traverse this rejection.

At page 17 of the Office Action the Examiner concedes that the allegedly obvious

combination of Alfano, Golestani, and Seddigh fails to disclose "the feature of

generating the retransmission request requesting a difference packet size to the destination communication device." Rather, the Examiner relies on Roobal to cure the acknowledged deficiencies of Alfano, Golestani, and Seddigh. The Examiner asserts, to which Applicants do not acquiesce, that Roobal discloses "a method of receiving, after the transmitting a retransmission request requesting a different packet size." However, Roobal is not stated to teach or suggest, nor does Roobal teach or suggest, at least the above noted distinguishing features of claims 7 and 12. Thus, as Roobal cannot be used to cure the deficiencies of Alfano, Golestani, and Seddigh, the applied references cannot be used to establish a *prima facie* case of obviousness for claims 7 and 12.

At least based on their respective dependencies to claims 7 and 12, claims 10 and 14 should be found allowable over the applied references, as well as for their additional distinguishing features.

Accordingly, Applicants respectfully request that the rejections of claims 1, 4, 7-10, 12-16, 18, and 20-23 be removed and that these claims be passed to allowance.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.
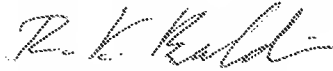
Atty. Dkt. No. 2222.6080000

Prompt and favorable consideration of this Amendment and Reply is respectfully

requested.

Respectfully submitted;

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Randall K. Baldwin
Attorney for Applicants
Registration No. 59,713

Date: *31 August 2010*

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600
1135822_4.doc